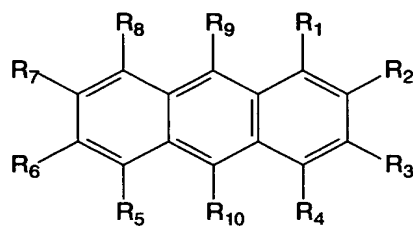


**WHAT IS CLAIMED:**

1. An organic light-emitting device, comprising a substrate, an anode, and a cathode disposed over the substrate, and a luminescent layer disposed between the anode and the cathode wherein the luminescent layer includes a host and at least one dopant, the host of the luminescent layer is selected to include a solid organic material comprising a mixture of at least two components, wherein the first component is an organic compound containing an aminoanthracene, and the second component of the mixture contains an organic compound having a dipole moment larger than that of the first component.

2. An organic light-emitting device, comprising:

- a) a substrate;
- b) an anode and a cathode disposed over the substrate;
- c) a luminescent layer disposed between the anode and the cathode wherein the luminescent layer includes a host and at least one dopant;
- d) the host of the luminescent layer being selected to include a solid organic material comprising a mixture of at least two components wherein:
  - i) the first component of the mixture contains an aminoanthracene compound of the formula:



wherein:

R<sub>1</sub> to R<sub>10</sub> are individually hydrogen, fluoro, halogen, hydroxy, nitro, cyano, unbranched alkyl or substituted unbranched alkyl of from 1 to 24 carbon atoms, branched alkyl or substituted branched alkyl of from 1 to 24 carbon atoms, cyclic alkyl or substituted cyclic alkyl of from 1 to 24 carbon

atoms, aryl or substituted aryl of from 5 to 40 carbon atoms, heterocyclic or substituted heterocyclic, alkenyl or substituted alkenyl, alkoxy or substituted alkoxy, aryloxy or substituted aryloxy, aromatic hydrocarbon or substituted aromatic hydrocarbon and at least one of  $R_1$  to  $R_{10}$  is diarylamino, arylalkylamino, or dialkylamino, and

ii) the second component of the mixture contains an organic compound having a dipole moment larger than that of the first component; and

e) the dopant of the luminescent layer being selected to produce light from the light-emitting device.

3. The organic light-emitting device of claim 2 wherein the first component of the host constitutes at least 1% by volume of the luminescent layer.

4. The organic light-emitting device of claim 2 wherein the first component of the host constitutes preferably 25-75% by volume of the luminescent layer.

5. The organic light-emitting device of claim 2 wherein the second component includes an oxinoid compound.

6. The organic light-emitting device of claim 5 wherein the second component includes  $AlQ_3$ ,  $GaQ_3$ ,  $InQ_3$ ,  $ScQ_3$ ,  $ZnQ_2$ ,  $BeBq_2$  (bis(10-hydroxybenzo[*h*]quinolinato)beryllium),  $Al(4-MeQ)_3$ ,  $Al(2-MeQ)_3$ ,  $Al(2,4-Me_2Q)_3$ ,  $Ga(4-MeQ)_3$ ,  $Ga(2-MeQ)_3$ ,  $Ga(2,4-Me_2Q)_3$ ,  $Mg(2-MeQ)_2$ , or  $Al(2-MeQ)_2(X)$  wherein X is aryloxy, alkoxy, arylcarboxylate, or heterocyclic carboxylate group.

7. The organic light-emitting device of claim 2 wherein the second component of the host constitutes preferably 75-25% by volume of the luminescent layer.

8. The organic light-emitting device of claim 2 wherein the dopant concentration in the luminescent layer is between 0.1 and 10% by volume.

9. The organic light-emitting device of claim 2 wherein the dopant includes a coumarin dye.

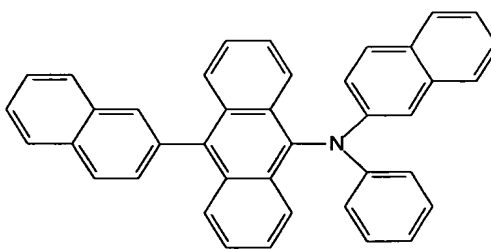
10. The organic light-emitting device of claim 9 wherein the dopant includes C-6, C-545T, or C-525T.

11. The organic light-emitting device of claim 2 wherein the dopant includes a quinacridone dye.

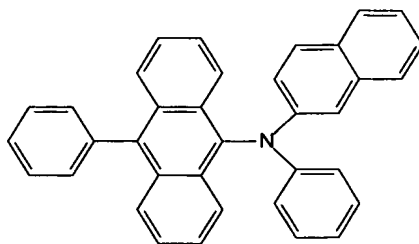
12. The organic light-emitting device of claim 11 wherein the dopant includes QA, DMQA, CFDMQA, or DPQA.

13. The organic light-emitting device of claim 2 wherein the dopant produces blue, blue-green, green, green-yellow, or yellow light.

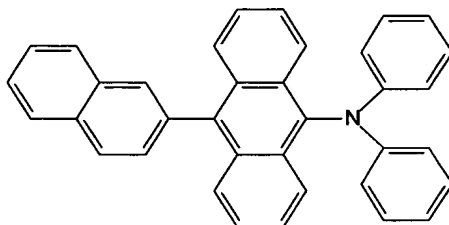
14. The organic light-emitting device of claim 2 wherein the first component of the host includes a compound of the formula:



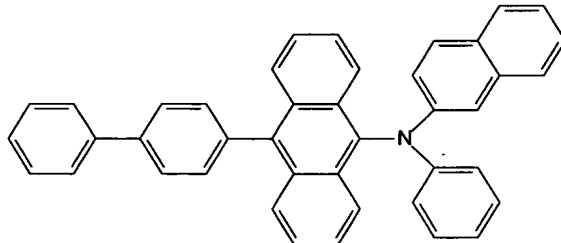
15. The organic light-emitting device of claim 2 wherein the first component of the host includes a compound of the formula:



16. The organic light-emitting device of claim 2 wherein the first component of the host includes a compound of the formula:

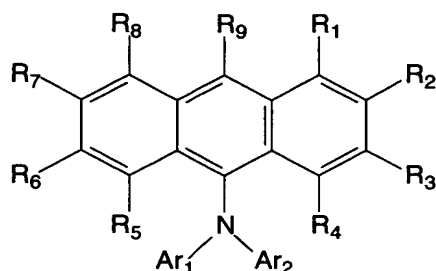


17. The organic light-emitting device of claim 2 wherein the first component of the host includes a compound of the formula:



18. An organic light-emitting device, comprising:

- a) a substrate;
- b) an anode and a cathode disposed over the substrate;
- c) a luminescent layer disposed between the anode and the cathode wherein the luminescent layer includes a host and at least one dopant;
- d) the host of the luminescent layer being selected to include a solid organic material comprising a mixture of at least two components wherein:
  - i) the first component of the mixture contains an aminoanthracene compound of the formula:



wherein:

$R_1$  to  $R_9$  are individually hydrogen, fluoro, halogen, hydroxy, nitro, cyano, unbranched alkyl or substituted unbranched alkyl of from 1 to 24 carbon atoms, branched alkyl or substituted branched alkyl of from 1 to 24 carbon atoms, cyclic alkyl or substituted cyclic alkyl of from 1 to 24 carbon atoms, aryl or substituted aryl of from 5 to 40 carbon atoms, heterocyclic or substituted heterocyclic, alkenyl or substituted alkenyl, alkoxy or substituted alkoxy, aryloxy or substituted aryloxy, aromatic hydrocarbon or substituted aromatic hydrocarbon;  $Ar_1$  and  $Ar_2$  are individually aryl or substituted aryl of from 5 to 40 carbon atom.; and

ii) the second component of the mixture contains an organic compound having a dipole moment larger than that of the first component; and

e) the dopant of the luminescent layer being selected to produce light from the light-emitting device.

19. The organic light-emitting device of claim 18 wherein the first component of the host constitutes at least 1% by volume of the luminescent layer.

20. The organic light-emitting device of claim 18 wherein the first component of the host constitutes preferably 25-75% by volume of the luminescent layer.

21. The organic light-emitting device of claim 18 wherein the second component includes an oxinoid compound.

22. The organic light-emitting device of claim 21 wherein the second component includes  $\text{AlQ}_3$ ,  $\text{GaQ}_3$ ,  $\text{InQ}_3$ ,  $\text{ScQ}_3$ ,  $\text{ZnQ}_2$ ,  $\text{BeBq}_2$  (bis(10-hydroxybenzo[*h*]quinolinato)beryllium),  $\text{Al}(4\text{-MeQ})_3$ ,  $\text{Al}(2\text{-MeQ})_3$ ,  $\text{Al}(2,4\text{-Me}_2\text{Q})_3$ ,  $\text{Ga}(4\text{-MeQ})_3$ ,  $\text{Ga}(2\text{-MeQ})_3$ ,  $\text{Ga}(2,4\text{-Me}_2\text{Q})_3$ ,  $\text{Mg}(2\text{-MeQ})_2$ , or  $\text{Al}(2\text{-MeQ})_2(\text{X})$  wherein X is aryloxy, alkoxy, arylcarboxylate, or heterocyclic carboxylate group.

23. The organic light-emitting device of claim 18 wherein the second component of the host constitutes preferably 75-25% by volume of the luminescent layer.

24. The organic light-emitting device of claim 18 wherein the dopant concentration in the luminescent layer is between 0.1 and 10% by volume.

25. The organic light-emitting device of claim 18 wherein the dopant includes a coumarin dye.

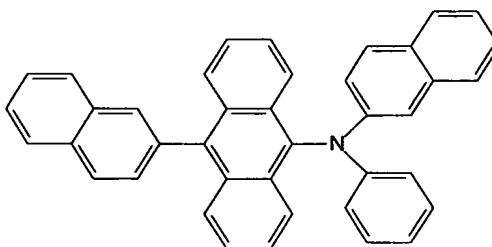
26. The organic light-emitting device of claim 25 wherein the dopant includes C-6, C-545T, or C-525T.

27. The organic light-emitting device of claim 18 wherein the dopant includes a quinacridone dye.

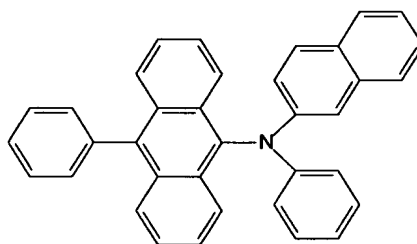
28. The organic light-emitting device of claim 27 wherein the dopant includes QA, DMQA, CFDMQA, or DPQA.

29. The organic light-emitting device of claim 18 wherein the dopant produces blue, blue-green, green, green-yellow, or yellow light.

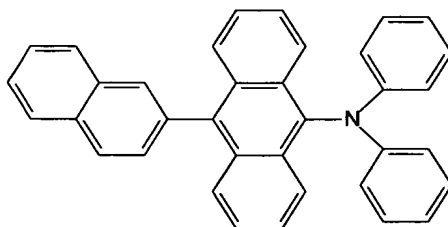
30. The organic light-emitting device of claim 18 wherein the first component of the host includes a compound of the formula:



31. The organic light-emitting device of claim 18 wherein the first component of the host includes a compound of the formula:



32. The organic light-emitting device of claim 18 wherein the first component of the host includes a compound of the formula:



33. The organic light-emitting device of claim 18 wherein the first component of the host includes a compound of the formula:

